

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 74. (Canceled)

75. (Presently Amended) A method for identifying an agent that binds to an adenine nucleotide translocator (ANT) polypeptide, comprising:

contacting a candidate agent with a host cell expressing a recombinant polypeptide having at least 95% identity to at least one recombinant ANT polypeptide selected from the group consisting of human ANT1, as set forth in SEQ ID NO:31, human ANT2, as set forth in SEQ ID NO:32, and human ANT3, as set forth in SEQ ID NO:33, under conditions and for a time sufficient to permit binding of the agent to said recombinant ANT-polypeptide; and detecting binding of said agent to the recombinant ANT-polypeptide.

76. (Original) The method of claim 75 wherein the host cell is a prokaryotic cell.

77. (Original) The method of claim 76 wherein the prokaryotic cell is an E. coli cell.

78. (Original) The method of claim 75 wherein the host cell is a eukaryotic cell.

79. (Original) The method of claim 78 wherein the eukaryotic cell is selected from the group consisting of a yeast cell, an insect cell and a mammalian cell.

80. (Original) The method of claim 79 wherein the insect cell is selected from the group consisting of an Sf9 cell and a Trichoplusia ni cell.

81. (Original) The method of any one of claims 75-80 wherein the host cell lacks at least one isoform of an endogenous adenine nucleotide translocator.

82. (Original) The method of any one of claims 75-80 wherein host cell expression of at least one gene encoding an endogenous adenine nucleotide translocator isoform is substantially impaired.

83. (Presently Amended) A method for identifying an agent that binds to an adenine nucleotide translocator (ANT) polypeptide, comprising:

contacting a candidate agent with a biological sample comprising ~~containing~~ at least one recombinant polypeptide having at least 95% identity to recombinant an ANT polypeptide selected from the group consisting of human ANT1, as set forth in SEQ ID NO:31, human ANT2, as set forth in SEQ ID NO:32, and human ANT3, as set forth in SEQ ID NO:33, under conditions and for a time sufficient to permit binding of the agent to said ANT recombinant polypeptide; and

detecting binding of said agent to the recombinant ANT-polypeptide.

84. (Presently Amended) A method for identifying an agent that interacts with an adenine nucleotide translocator (ANT) polypeptide comprising:

contacting a biological sample comprising a ~~containing~~ recombinant polypeptide having at least 95% identity to an ANT polypeptide selected from the group consisting of human ANT1, as set forth in SEQ ID NO:31, human ANT2, as set forth in SEQ ID NO:32, and human ANT3, as set forth in SEQ ID NO:33, with a detectable ANT ligand in the absence and in the presence of a candidate agent; and

comparing binding of the detectable ANT ligand to recombinant ANT polypeptide in the absence of said agent to binding of the detectable ANT ligand to recombinant ANT-polypeptide in the presence of said agent, and therefrom identifying an agent that interacts with an ANT polypeptide.

85 - 103. (Canceled)

104. (Presently Amended) An assay plate for high throughput screening of candidate agents that bind to at least one adenine nucleotide translocator (ANT) polypeptide, comprising:

an assay plate having a plurality of wells, each of said wells ~~further~~ comprising at least one immobilized recombinant ANT polypeptide selected from the group consisting of human ANT1, as set forth in SEQ ID NO:31, human ANT2, as set forth in SEQ ID NO:32, and human ANT3, as set forth in SEQ ID NO:33, or a recombinant variant or fragment thereof, wherein said recombinant variant has at least 95% identity to the recombinant ANT polypeptide and wherein said fragment comprises at least 30 contiguous amino acid residues of the recombinant ANT polypeptide.

105 - 112. (Canceled)